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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/648,840

08/26/2003

William F. Howard

WEAT/0315

3846

36735

7590

03/10/2006

PATTERSON & SHERIDAN, L.L.P.
3040 POST OAK BOULEVARD, SUITE 1500
HOUSTON, TX 77056

EXAMINER

BOMAR, THOMAS S

ART UNIT

PAPER NUMBER

3672

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/648,840	HOWARD, WILLIAM F.	
	Examiner	Art Unit	
	Shane Bomar	3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4, 5, 7-19, and 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent 1,504,658 to Ulmer.

Regarding claims 1, 2, 5, and 8-10, Ulmer discloses a downhole pumping apparatus for pumping fluids from a wellbore, comprising: a barrier 12 extending along at least a portion of the wellbore to isolate an interior region of the wellbore from the adjacent earth; a centrifugal pump positionable in the wellbore in a producing region thereof, wherein housings 1 and 5 are in series and each contain an impeller 23 and 45, respectively, the outlet of each housing coupled to the next housing in the series, and the impellers are configured to increase the pressure of the fluids because it is notoriously known in the art that this is exactly the function of impellers (see page 2, lines 106-113); a sleeve 17 extending from the opening of the wellbore at the earth's surface to the centrifugal pump; a drive member inherently located outwardly of the bore; a drive rod 14, 16 extending within said sleeve and interconnected to said pump and said drive member; and an inherent dampening element positioned in contact with said drive rod within the wellbore when said drive rod is actuated by said drive member to operate said pump (see Figs. 1 and 2, and page 1, line 93 through page 2, line 16). The oil contained in the sleeve 17 is considered an inherent dampening element because it is contained in an annulus between the sleeve and the drive rod in

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a nearly identical fashion to that of the instant invention, therefore the oil would have to provide the same capabilities.

Regarding claim 4, the drive member rotates the drive rod (see page 1, lines 103-108 and page 2, lines 114-117).

Regarding claim 7, the rod includes at least one mass imbalance portion therein, i.e., the connection at 15 (see Figs. 1 and 2).

Regarding claims 11 and 12, production tubing 2 extends from said pump to a location adjacent the opening of the wellbore in the earth; and said pump includes a pump outlet in fluid communication with said production tubing 2, wherein said sleeve 17 extends within, and is substantially surrounded by, said production tubing (see Fig. 2)

Regarding claim 13, casing 12 extends along the borehole (see Figs. 1 and 2).

Regarding claims 14-16, Ulmer discloses an inherent method of recovery of fluids from a borehole, wherein the fluids exist at a pressure in the borehole insufficient to naturally drive them to the surface of their own accord, comprising: providing a centrifugal pump in the borehole and having a fluid inlet, a fluid outlet, and an energy transfer mechanism 14, 16 to transfer energy to the well fluids sufficient cause them to be lifted to the opening of the borehole with the earth's surface; positioning a drive member at a location remote from the pump to provide energy transferred through rotary motion to the pump; extending the energy transfer mechanism from the pump to the drive member, the energy transfer mechanism including an inherent excursion-dampening element that further includes a drive rod received in a sleeve 17 housing a lubricant; and pumping fluids from the wellbore with the series of impellers 23 and 45 (see Figs. 1 and 2, page 1, line 93 through page 2, line 16, and page 2, lines 114-117). The oil

contained in the sleeve 17 is considered an inherent dampening element because it is contained in an annulus between the sleeve and the drive rod in a nearly identical fashion to that of the instant invention, therefore the oil would have to provide the same capabilities.

Regarding claim 17, said pump includes at least one impeller 23 received within a diffuser housing and the impeller is rotatably driven by a rod extending down the wellbore from a drive mechanism located adjacent said wellhead (see Fig. 2).

Regarding claim 18, the rod includes at least one mass imbalance portion therein, i.e., the connection at 15 (see Figs. 1 and 2).

Regarding claims 19, 21, and 24, Ulmer discloses a downhole pumping apparatus, comprising: a centrifugal pump stack having an inlet, an outlet, and a plurality of impellers 23, 45, wherein the outlet of 45 is coupled to the inlet of 23, and diffuser housings in fluid communication therein received in a wellbore (see Fig. 1); a drive rod 14, 16 extendible from a surface location, downwardly through said wellbore, and in physical coupled engagement with at least one of said impellers; a drive member located adjacent to said wellbore and in physical driving engagement with said drive rod outwardly of said wellbore; said drive rod including an inherent naturally occurring excursion element therein; and an inherent excursion prevention element disposed in relation to said drive rod to prevent excursion of said drive rod, wherein the excursion prevention element includes a sleeve 17 extending about the drive rod and forming an annulus containing oil therebetween (see Figs. 1 and 2, page 1, line 93 through page 2, line 16, and page 2, lines 114-117). The oil contained in the sleeve 17 is considered an inherent excursion prevention element because it is contained in an annulus between the sleeve and the

drive rod in a nearly identical fashion to that of the instant invention, therefore the oil would have to provide the same capabilities.

Regarding claim 22, the rod includes at least one mass imbalance portion therein, i.e., the connection at 15 (see Figs. 1 and 2).

Regarding claim 23, production tubing 2 extends from said pump to a location adjacent the opening of the wellbore in the earth, wherein said sleeve 17 extends within, and is substantially surrounded by, said production tubing 2 (see Fig. 2)

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 6, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ulmer.

While Ulmer teaches the apparatus of claims 1 and 19 above that inherently contains a motor (inherent because it is not shown, but must be there to drive the pump), it is not specifically taught what type of drive member, or motor, is used and at what speeds it operates. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the motor could be electric since electric motors are notoriously known in the art to be used to drive pumps. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the motor could be operated at speeds in excess of

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3400 RPM. The motivation for this last statement is that the structures of the Ulmer apparatus and the instant invention are nearly identical. Therefore, barring any showings or assertions in the current invention to the contrary, it would have been obvious that the pump of Ulmer could be driven at speeds in excess of 3400 RPM depending on the motor used and/or on the conditions encountered in the borehole.

Response to Arguments

5. Applicant's arguments filed January 4, 2006 have been fully considered but they are not persuasive. It appears that the Applicant has misinterpreted the Ulmer reference because the arguments are focused on the helix configurations 27 and 36, which are internal helices for excluding sand and water from the bearings, whereas I relied upon the impellers 23 and 45 that in fact do the pumping and are clearly in series.

6. Applicant's arguments, see pages 14-15, filed January 4, 2006, with respect to the rejections regarding the Michael et al reference have been fully considered and are persuasive. The rejections of the claims involving said reference have been withdrawn.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO


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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shane Bomar whose telephone number is 571-272-7026. The examiner can normally be reached on Monday - Thursday from 6:30am to 4:00pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


David J. Bagnell
Supervisory Patent Examiner
Art Unit 3672

tsb 
March 3, 2006